

| *United States technical assistance in Chile demonstrates how public health activities may merge with community or area development.*

## Public Health in Chile

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THE RIBBON of land that is Chile is a much more logically bounded nation than it appeared to be when we first noticed its odd shape in our school geographies. In spite of its bizarre stretch from the bleak deserts of the north to the wet forests of the south, it forms a true geographic unit in the sense that it is a terrace between the world's longest mountain wall on the east and the emptiest reach of ocean on the west. It is strikingly like our own west coast in reverse latitudes, and the similarity of the Chilean and California central valleys brings frequent comment. But, unlike our west coast, it lies very much alone, a narrow, walled-off strip of sovereignty.

Chile does not have, as does our west coast, the immense advantage of being a part of a huge nation stretching to the Atlantic, which can supply capital and markets. Nor has it had, from the founding of Santiago in 1541 down to recent years, the advantage of those cultural drives that in the United States blocked the transplanting of European feudalism. Landed

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estates—the *fundos*—were carrying family names into the third colonial generation when the Pilgrims touched Plymouth Rock, and until 30 years ago no change of the *patrón-peón* relationship was in sight. This rigid land tenure system molded economic and social life for four centuries, but it failed to cope with the needs precipitated by an increasing population in the 20th century competitive world. Failure was cloaked for a time by rich mineral revenue, first from nitrates and then from copper, but the country's economic inadequacy was eventually reflected in constantly increasing food deficits.

Although a paradoxically progressive and unusually comprehensive social legislation has been spread over this scene, it was supported in its early days by export products largely developed by foreign capital. Much of the national income has been derived by negotiation abroad rather than by economic planning at home, a practice which perhaps has had the effect of stultifying the concepts of self-development. Between the remnants of Iberian feudalism and the beginning of trends toward socialism, planned community and area development had no sponsor. This situation may be a major key to the slow progress in environmental sanitation.

### Health Priorities

In planning technical assistance in public health, the first priority for any area is always the major plagues that can be assailed with

simple, effective techniques at small cost. Malaria and yaws have become classic examples. But where there are no such challenges, what then? What should we do in Chile, where no major scourges await penicillin or DDT? Here a literate, progressive, democratic, white population of 6 million people live in a favorable climate. There are no cultural blockades to hamper health measures. Indeed, highly trained Chilean technicians are drawing foreign students to their country, and many are serving abroad as public health consultants. In such an environment, less developed only in the economic sense and not handicapped by any natural health hazards, the impelling need is to contribute some technique that does not degenerate into a mere operational convenience and a vehicle for dollar credits. The problem, then, is to determine priorities on the basis of public health's most significant impingement on the economic dilemma without losing the integrity of the program by actually departing from the field of public health.

The health problems of Chile are not those of geographic environment and insect vectors. The major factors in disease incidence are those commonly associated with economic stress in a rapidly growing, overcentralized, somewhat stratified white society living in a temperate climate. Medical care has produced a substantial decrease in the incidence of those diseases which yield to therapy or which can be controlled by immunization. Poor progress has been made in health situations which are best handled by community effort inspired by local civic enterprise, that is, in environmental sanitation, housing, and nutrition.

#### **A Socioeconomic Problem**

Excreta disposal methods and water sources in rural areas have improved little since the colonial period. Latrines are often placed over irrigation ditches, which are the usual source of domestic water. The plentiful underground water sources have scarcely been touched. Population increase is greatly exceeding housing construction, and this situation is aggravated by disorganized population shifts resulting from industrialization and urbanization. Mushroom shanty towns—the *callampas*—



**This well provides the first underground water ever seen in Peumo. It was dug by the men of the household, and cement capping and pumps were bought on credit from the Servicio.**

surround Santiago, Concepción, and many other cities. Recent agricultural deficits and inflationary prices have added to an existing dietary deficiency. A definitely low health standard in nutrition coupled with poor sanitation is reflected in the notably high infant mortality rate, which was 252 per 1,000 live births in 1936 and has only recently dropped below 150.

The health services of Chile are almost completely socialized. The huge Beneficencia system, which had taken over the health services once provided by the church, was absorbed by the new National Health Service in 1953. Thus, sick benefits, hospitals, medical service, and public health were centralized in one large federal agency employing more than 33,000 persons. Many years will be required to put this organization in working order in a decentralized pattern. In the major cities medical services and facilities are of a high order, al-

though seldom elaborate, but this standard drops rapidly to a low level in country districts and to a near nil in the remote areas. Among the latter are the desert towns of the north, where water may be sold by the liter, and the forest lands of the far south, where 100,000 people live on the remote shores of the world's most intricate labyrinth of inland waters.

To find a sound footing for technical assistance in public health in a socioeconomic milieu of this type is a severe challenge. In such a highly centralized population (nearly one-third live in Santiago), one can expect little help from urban interests in planning programs for rural areas, where the present need is greatest and where the future hope of the economy most likely rests.

### **The Health Servicio**

The United States, through the Institute of Inter-American Affairs, has been providing technical assistance to Chile since 1943. As in other Latin American countries, the cooperative health program of the two governments is carried out through a Servicio, a special agency of the host government. During the first several years of the program, a commendable series of demonstrations was produced—complete health centers, sewage systems and disposal plants, rural and urban water systems, tuberculosis sanatoriums, strategic hospital construction and equipment projects, a building for a dried milk plant, assistance to the School of Public Health in Santiago, and others. Training of Chileans in health was an important part of these demonstrations, and more than a hundred trainees were sent to the United States. Although there can be no doubt as to the success of this period and although the projects have been turned over to the appropriate agency of the Chilean Government, the demonstrations, as such, soon reached their own limit of feasibility. An approach to more basic problems was sought.

In any economy there are gaps that need closing and bottlenecks that need widening, and some of these can be remedied in part with public health measures. When such a gap or bottleneck is identified and when the value of the remedial measure as a demonstration in relation to its cost is determined, a priority is es-

tablished. This approach is, to be sure, one that views technical assistance in public health as one aspect of economic betterment.

In Chile, rural sanitation and community self-sufficiency appeared to be the developmental gaps pertaining most directly to both the socioeconomic scene and to public health. Improvement in rural sanitation required control of excreta disposal and the tapping of underground water sources, the latter having an important bearing on agriculture as well as health. Development in community self-sufficiency required a plan to demonstrate the advantages of full utilization of local autonomy and to stimulate community initiative and sense of social responsibility. These objectives were combined by the health Servicio in a community development project in a rural area southwest of Santiago. This project, called the Peumo project after the town where the work is concentrated, was begun in 1951 with Dr. Theodore I. Gandy as chief of party.

### **The Peumo Project**

The area from which a site for a community development project was selected includes about 3,750 square kilometers of land and has a population of nearly 150,000. A few hours' drive from Santiago, it provided both the prerequisite of representative rurality and the administrative advantage of being accessible to the Servicio headquarters. The area is a fertile one. Citrus fruit, avocados, olives, and rice were grown extensively, but practically no vegetables were raised for home consumption. Contaminated surface water was used by more than 90 percent of the population in and around Peumo, and sanitary disposal of excreta was almost nonexistent. The early effectiveness of educational techniques used in approaching these two problems permitted a rapid extension of the project into other fields, including agronomy, home economics, and housing construction. In the process of extension, the project spontaneously evolved into a community development program acquiring local acceptance and participation, step by step.

No effort was made to define sharply the categories of activity; they fell easily into the basic pattern of health education, sanitary engineer-

ing, agronomy, and self-help housing. Agronomy soon included all phases of home economics. Operation of the project was based in a local headquarters, which contained offices, workshops, warehouses, a guest house, and recreation facilities. Existing citizen committees were utilized, and new ones were created to facilitate local participation. The resident chief of the project was an engineer on the staff of the National Health Service.

The transfer of technically trained Chilean personnel from the urban centers to this rural area resulted in the project's staff becoming involved in a host of activities that were peripheral to the first intent—suggesting recreational devices, designing a market, and planning improvement of the local hospital, for example. The quick wit of the community in availing itself of this indigenous but previously unavailable talent suggests that at least one cause for the lack of development in rural communities stems from an urban concentration of specialized skills rather than from any local recalcitrancy to technical innovation, lack of aptitude, or obtuse “cultural obstacles.”

Similar experience in community development has been derived at San Felipe, where in 1947 Chilean authorities, with assistance from the Rockefeller Foundation, began a project in which agronomy was combined with health center activities. The home economics phase of the San Felipe project has been notably successful in securing local response.

The health education phase of the Peumo project was so effective that there has been a consistent backlog of orders for latrines, wells, and pumps. Latrines are made with concrete base and riser with a seat of the type conventionally used in flush toilets. The wooden house has a pressed-asbestos sheet roof. Wells are capped with concrete and are supplied with the kind of hand pump commonly used in rural areas in the United States. The property owner digs his own latrine pit and well, and he buys the latrines and imported pumps on credit. Deep wells are drilled for large farms and for small community water supplies. A pattern now emerging is for communities to raise all or part of the funds for development of a well and water system before they request assistance.

Sometimes the Chilean Ministry of Public Works cooperates in such projects.

The program in agronomy began with spraying, fertilization, and cultivation of orchards, thus winning acceptance by initial concentration on improving the yield of cash crops. From this beginning, it branched easily into the purchase of seed for home gardens, food preserving, and home economics in general, all carried out by women's clubs. In an area accustomed to importing vegetables, the savings made in the home budget were quickly appreciated. Farmers soon formed cooperatives for collective purchasing of agricultural supplies and equipment heretofore seen only on the large estates.

Cement-block machines are provided for the self-help housing program. A cooperative of families is divided into three groups, and each group pools its labor force to construct one house at a time. Woodworking machinery is made available to the cooperative, and all materials are supplied on credit, the cost being reimbursed in modest monthly payments.

The Peumo project demonstrated two important lessons that may be assumed to be generally applicable to Chilean rural life. The first of these is that the use of local participation in an attempt to introduce a single improvement may lead spontaneously to a more inclusive community development project in which short-term impact can be combined with long-term advantages. The second lesson is that a Chilean rural community is eager and able to achieve group action in response to proffered assistance, to mobilize its resources, and to produce solutions to community problems with technical guidance and modest credit. Success in this respect is facilitated by choosing a locally felt need for initial action and only later fulfilling the possibly more basic needs, the knowledge of which has been engendered by education. This approach is what Foster terms “taking advantage of the pragmatic nature of people,” 1 of 12 essentials he lists for community development (1).

Under other circumstances, the health Servicio might have considered reproducing the Peumo project in various locations throughout Chile to exploit the potential of this method of stimulating self-help. The disadvantage of this procedure would be that its success would



**An agronomist explains how to grow vegetables among trees, as part of the Peumo project. Vegetables were formerly purchased from a distant town at high prices.**

be dependent on the effectiveness of demonstrations arranged in a spotted distribution pattern. In a country 2,600 miles long, with valleys isolated from one another by a rugged terrain, the spread of even the most contagious idea is geographically handicapped. Instead, the health Servicio chose to take advantage of the opportunity to participate in an area development program initiated by the Ministry of Agriculture and the agricultural Servicio.

### **The Area Development Program**

The plan for an area development program in Chile came into being in 1953. It evolved from the decision of the Ministry of Agriculture and the agricultural Servicio to concentrate their cooperative efforts in a large area of the country in order to produce a significant demonstration of methods which might correct the agricultural deficit so embarrassing to the national economy. Several national and international agencies are now participating in the program, which covers the three provinces of Maule, Ñuble, and Concepción in south central Chile, with a population of about 750,000. Although the agricultural phase has been in full swing for 2 years, the health Servicio has only recently joined the program.

This area development program, or Plan

Chillán, as it is called, offered an opportunity for integrating rural sanitation demonstrations with agricultural activities in a flourishing program sufficiently significant to attract national and international attention. With such integration, each community can sense the relation between its own efforts in health and the efforts of the area toward general economic betterment. The economic interdependence of health and agriculture can be demonstrated. This vitally important concept, it is felt, can be understood more readily through the medium of a large collective endeavor than through segmented programs located here and there.

The basic philosophy of the technical assistance program for public health in Chile, then, is this: A health project expanded into a community development program can carry improved technology to the community more effectively when it is devised as a partner in a team with agricultural and other activities. It can travel further into the national consciousness by this means than as an independent project. Even when a health project is very much a minor partner in a program, it is not in danger of losing its identity; on the contrary, it profits by its association with an endeavor that reaches national recognition and enjoys central government support.

Past experience has illustrated advantages of

integrated activity. In our own Tennessee Valley Authority enterprise, for example, each phase of the program, including health, achieved greater recognition through its association with TVA. In addition, the pooling of resources in a single economic objective draws host government ministries together and provides the opportunity for what may well be the greatest contribution of technical assistance, that is, the demonstration that integrated activity is a primary requisite of progress.

### Summary

With a successful pilot project in community development behind it, the health Servicio in Chile is now directing its major effort toward giving rural people a stake in economic affairs by developing underground water and by stimulating concepts of community responsibility in health, as part of an area development program.

These priorities were not derived by attempting to round out a health service in all its branches. Rather, they evolved from an effort to find one or two negotiable, long-range concepts that most certainly and most directly would improve the economy and living standards through health channels.

At the same time, there is a growing conviction among workers in Chile that where health problems are part of a socioeconomic complex (as opposed to concise environmental problems yielding to specific technical methods) they can be solved most readily by incorporating health activities in a broad endeavor, such as an area development program.

### REFERENCE

- (1) Foster, G. M.: Guidelines to community development programs. Pub. Health Rep. 70: 19-24, January 1955.

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## Rehabilitation Gains

In the first year after enactment of the Vocational Rehabilitation Act of 1954, the State-Federal rehabilitation program has tooled up under the new law, adjusted to related legislation, and laid the foundation for the future, according to the Office of Vocational Rehabilitation, Department of Health, Education, and Welfare.

The new legislation is designed to bring about a progressive expansion in the vocational rehabilitation programs. Improved rehabilitation services, support of training courses and traineeships for badly needed rehabilitation workers, and special research or demonstration projects are making it possible to increase the number of handicapped workers returned to productive employment.

Approximately 58,000 disabled persons became gainful workers during fiscal 1955—an approximate increase of 2,000 over the preceding 12 months. Federal grants amounting to \$30 million are available for the basic support of State and Territorial vocational rehabilitation programs in 1956. An additional \$2.6 million, to be matched with State funds, is scheduled for use in expanding rehabilitation centers.

The related legislation is the Social Security Act of 1954 and the 1954 Medical Facilities Survey and Construction Act. The State agencies determine whether a handicapped person is eligible to have his period of disability eliminated from the calculation of his monthly social security benefits. They are also concerned with surveys and plans to determine the needs for construction of comprehensive rehabilitation facilities.